



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
[www.uspto.gov](http://www.uspto.gov)

SG

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/782,941	02/14/2001	Eugene F. Rock	T9089	2326

7590 03/18/2003

Clifton W. Thompson  
THORPE, NORTH & WESTERN, L.L.P.  
P.O. Box 1219  
Sandy, UT 84091-1219

EXAMINER

DINH, TIEN QUANG

ART UNIT

PAPER NUMBER

3644

DATE MAILED: 03/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/782,941

Applicant(s)

ROCK, EUGENE F.

Examiner

Tien Dinh

Art Unit

3644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM  
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

1) Responsive to communication(s) filed on 30 December 2002.

2a) This action is FINAL.      2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

4) Claim(s) 1-3,6,8,10,14-16,21 and 22 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1-3,6,8,10,14-16,21 and 22 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) All b) Some \* c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.

3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) 13.

- 4) Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-3 and 6 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. It is not understood how the rotor 15 is teeterable. How does it teeter? There seems to be a lack of disclosure as to how rotor 15 teeters. Please explain.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 8, 10, 14-16, and 21-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is not understood what is meant by "substantially the same." The specification fails to disclose what substantially the same mean. Furthermore, the drawings clearly show that the rotors have the same diameter. Please explain.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

Art Unit: 3644

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 6 as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Sweden (172,026).

Sweden discloses a helicopter having a coaxial rotor set having a first rotor carried by a first shaft, a second rotor carried by a second shaft, the first rotor (lower one in figure 4) has cyclic pitch control (to control pitch and roll) while the second rotor does not. The first and second rotors are teeterable due to the blades being able to change the angle of attack. This makes the rotor teeterable.

Claims 8, 14, 21, and 22, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Apostolescu.

Opostolescu discloses a helicopter having a coaxial rotor set having a first rotor carried by a first shaft, a second rotor carried by a second shaft, the first rotor has cyclic pitch control (to control pitch and roll) while the second rotor does not (see column 2, lines 29-36). The first and second rotors have substantially the same diameters.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sweden (172,026) in view of German '795.

Sweden discloses all claimed parts except for the use of an airfoil/yaw paddle disposed in a downwash from the rotor set to control yaw. However, German '795 discloses that yaw paddles are well known in the art.

It would have been obvious to one skilled in the art at the time the invention was made to have used yaw paddles in Sweden's system as taught by German '795 to create greater yaw control.

Claims 10 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Apostulescu in view of Sweden (172,026).

Apostulescu discloses all claimed parts except for the lower rotor having cyclic blade pitch control linkages. However, Sweden discloses that lower rotors having cyclic blade pitch control linkages are well known in the art.

It would have been obvious to one skilled in the art at the time the invention was made to have made the lower rotor have the cyclic blade pitch control linkage in Apostulescu' system as taught by Sweden to increase maneuverability.

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Apostulescu in view of German '795.

Apostolescu discloses all claimed parts except for the use of an airfoil/yaw paddle disposed in a downwash from the rotor set to control yaw. However, German '795 discloses that yaw paddles are well known in the art.

It would have been obvious to one skilled in the art at the time the invention was made to have used yaw paddles in Apostolescu's system as taught by German '795 to create greater yaw control.

#### ***Response to Arguments***

The Examiner has decided to drop the rejection of certain claims in view of Sweden patent. However, the Examiner maintains that the Sweden reference discloses teeterable blades, which meets the limitation of the claims.

The Examiner has also use previously cited Apostolescu reference, which shows substantially same diameters. This meets what has been claimed.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, it would have been obvious to use paddles in Sweden's system as taught by German '975 to have greater control over the aircraft's yaw movement.

On page 6, last paragraph, is the applicant admitting that teeterable upper and lower rotors, upper and lower rotors of the same size, and cyclic pitch to either none of the rotors or to both of the rotors are well known in the art? If so, doesn't this anticipate the applicant's claims?

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tien Dinh whose telephone number is 703-308-2789. The examiner can normally be reached on 9-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Jordan can be reached on 703-306-4159. The fax phone numbers for the

Art Unit: 3644

organization where this application or proceeding is assigned are 703-306-4195 for regular communications and 703-306-4195 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-4195.

TD  
March 14, 2003

Twd  
3/14/03